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Operation availability method for computer programs - recovering software from failure and reprocessing or rejecting stimulus such that result is available to system user within specified stimulus response time

Patent Assignee: INT BUSINESS MACHINES CORP (IBMC); IBM CORP (IBMC)
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Number of Countries: 005 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 481231	A	19920422				199234 B
CA 2053344	A	19920418	CA 2053344	A	19911011	199234
US 5129080	A	19920707	US 90599178	A	19901017	199234
CA 2053344	C	19940329	CA 2053344	A	19911011	199418
EP 481231	B1	19971126	EP 91115808	A	19910918	199801
DE 69128271	E	19980108	DE 628271	A	19910918	199807
			EP 91115808	A	19910918	

Priority Applications (No Type Date): US 90599178 A 19901017

Cited Patents: No-SR.Pub

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 481231	A		13		
US 5129080	A		12	G06F-011/20	
EP 481231	B1 E	15		G06F-011/00	
Designated States (Regional): DE FR GB					
DE 69128271	E			G06F-011/00	Based on patent EP 481231
CA 2053344	A			G06F-009/00	
CA 2053344	C			G06F-009/00	

Abstract (Basic): EP 481231 A

The method involves dividing a computer program into a number of functional modules, and loading a copy of a functional module into a processor's address space, and locating a second copy of the functional module into a second processor's address space. The processor executes the first module to send application dependent state data to the second processor where it is received by the second module copy.

The processor executes the first module maintaining a normal application processing state. The second processor executes the second module, maintaining a secondary state knowledge sufficient to enable it to become a primary functioning module. Both processors, while executing their modules, maintain open sessions with a number of servers connected within the network. On demand the second functional module assumes the role of the first.

ADVANTAGE - Recovery from failure of either software or hardware occurs before failure becomes operationally visible.

Dwg.1/3

Abstract (Equivalent): EP 481231 B

The method involves dividing a computer program into a number of functional modules, and loading a copy of a functional module into a processor's address space, and locating a second copy of the functional module into a second processor's address space. The processor executes the first module to send application dependent state data to the second processor where it is received by the second module copy.

The processor executes the first module maintaining a normal application processing state. The second processor executes the second module, maintaining a secondary state knowledge sufficient to enable it to become a primary functioning module. Both processors, while executing their modules, maintain open sessions with a number of servers connected within the network. On demand the second functional

module assumes the role of the first.

ADVANTAGE - Recovery from failure of either software or hardware occurs before failure becomes operationally visible.

Dwg.1/3

Abstract (Equivalent): US 5129080 A

A software structure, an operational unit (OU), and a related availability management function (AMF) are the key components. The OU concept is implemented by partitioning as much of the system's software as possible into independent self-contained modules whose interactions with one another is via a network server. A stimulus enters the system and is routed to the first module in its thread, and from there transverses all required modules until an appropriate response is produced and made available to the system's user.

Each module is two copies of the code and data-space of the OU. One of the copies, called the Primary Address Space (PAS), maintains actual state data. The other copy, called the Standby Address Space (SAS), runs in a separate processor, and may, or may not maintain actual state data.

ADVANTAGE - Software recovers from failure and reprocess or reject stimulus so that result is available to user of system within specified response time for that type of stimulus.

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Title Terms: OPERATE; AVAILABLE; METHOD; COMPUTER; PROGRAM; RECOVER; SOFTWARE; FAIL; REPROCESSING; REJECT; STIMULUS; RESULT; AVAILABLE; SYSTEM ; USER; SPECIFIED; STIMULUS; RESPOND; TIME

Derwent Class: T01

International Patent Class (Main): G06F-009/00; G06F-011/00; G06F-011/20

International Patent Class (Additional): G06F-011/14

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